**What is claimed is:**

1. A heat-resistant plastic tube comprising:

a polyester-based elastomer which exhibits a change amount in angle of ± 10° or less in a shape retainability performance test, a change rate in inner diameter of ± 2% or less in a dimensional stability performance test, and a change rate in yield strength of ± 30% or less in a flexibility retainability performance test.

2. The heat-resistant plastic tube according to Claim 1, wherein the tube comprises a single layer comprising a polyester-based elastomer.

3. The heat-resistant plastic tube according to Claim 1, wherein the tube comprises:

an inner layer comprising a polyester-based elestomer and an outer layer formed on an outside of the inner layer and comprising a crystalline polyester-based resin.

4. The heat-resistant plastic tube according to Claim 1, wherein the tube comprises an inner layer comprising a crystalline polyester-based resin and an outer layer formed on an outside of the inner layer and comprising a polyester-based elastomer.

5. The heat-resistant plastic tube according to Claim 1, wherein

the tube comprises at least an inner layer comprising a polyester-based elastomer, an intermediate layer formed on an outside of the inner layer and comprising a crystalline polyester-based resin, and an outer layer formed on an outside of the intermediate layer and comprising a polyester-based elastomer.

6. The heat-resistant plastic tube according to Claim 1, wherein the tube is a fuel feed tube usable within an engine compartment of a motor vehicle.

7. The heat-resistant plastic tube according to Claim 2, wherein the tube is a fuel feed tube usable within an engine compartment of a motor vehicle.

8. The heat-resistant plastic tube according to Claim 3, wherein the tube is a fuel feed tube usable within an engine compartment of a motor vehicle.

9. The heat-resistant plastic tube according to Claim 4, wherein the tube is a fuel feed tube usable within an engine compartment of a motor vehicle.

10. The heat-resistant plastic tube according to Claim 5, wherein the tube is a fuel feed tube usable within an engine

compartment of a motor vehicle.

11. The heat-resistant plastic tube according to Claim 1, wherein the tube further comprises a bellows portion extending at least part of its length.

12. The heat-resistant plastic tube according to Claim 2, wherein the tube further comprises a bellows portion extending at least part of its length.

13. The heat-resistant plastic tube according to Claim 3, wherein the tube further comprises a bellows portion extending at least part of its length.

14. The heat-resistant plastic tube according to Claim 4, wherein the tube further comprises a bellows portion extending at least part of its length.

15. The heat-resistant plastic tube according to Claim 5, wherein the tube further comprises a bellows portion extending at least part of its length.

16. The heat-resistant plastic tube according to Claim 3, wherein an innermost of the layers has a surface resistivity in a range of from $10^2$ to $10^9$ $\Omega$/sq.

17. The heat-resistant plastic tube according to Claim 4, wherein an innermost of the layers has a surface resistivity in a range of from $10^2$ to $10^9$ Ω/sq.

18. The heat-resistant plastic tube according to Claim 5, wherein an innermost of the layers has a surface resistivity in a range of from $10^2$ to $10^9$ Ω/sq.

19. The heat-resistant plastic tube according to Claim 13, wherein an innermost of the layers has a surface resistivity in a range of from $10^2$ to $10^9$ Ω/sq.

20. The heat-resistant plastic tube according to Claim 14, wherein an innermost of the layers has a surface resistivity in a range of from $10^2$ to $10^9$ Ω/sq.

21. The heat-resistant plastic tube according to Claim 15, wherein an innermost of the layers has a surface resistivity in a range of from $10^2$ to $10^9$ Ω/sq.

22. A manufacturing method of the heat resistant plastic tube according to Claim 1, the tube having a bent portion, comprising steps of setting a body of a heat resistant plastic tube in a thermal bending mold, heating the tube body in the mold at 190°C or higher and cooling the tube body in

a state being set in the mold.

23. A manufacturing method of the heat-resistant plastic tube according to Claim 2, the tube having a bent portion, comprising steps of setting a body of a heat resistant plastic tube in a thermal bending mold, heating the tube body in the mold at 190°C or higher and cooling the tube body in a state being set in the mold.

24. A manufacturing method of the heat resistant plastic tube according to Claim 3, the tube having a bent portion, comprising steps of setting a body of a heat resistant plastic tube in a thermal bending mold, heating the tube body in the mold at 190°C or higher and cooling the tube body in a state being set in the mold.

25. A manufacturing method of the heat resistant plastic tube according to Claim 4, the tube having a bent portion, comprising steps of setting a body of a heat resistant plastic tube in a thermal bending mold, heating the tube body in the mold at 190°C or higher and cooling the tube body in a state being set in the mold.

26. A manufacturing method of the heat resistant plastic tube according to Claim 5, the tube having a bent portion,

comprising steps of setting a body of a heat resistant plastic tube in a thermal bending mold, heating the tube body in the mold at 190°C or higher and cooling the tube body in a state being set in the mold.